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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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EXAMINER

SHEDRICK, CHARLES TERRELL

ART UNIT PAPER NUMBER

2687

DATE MAILED: 01/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/657,700 | NIEMENMAA, JARKO | |
| | Examiner | Art Unit | |
| | Charles Shedrick | 2687 | |

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 November 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claim 1-23 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zadeh et al., (U.S. Patent # 6,047,182, "Zadeh" hereinafter) in view of Fischer et al. (U.S. Patent No.: 6,295,455 B1 "Fischer" hereinafter)

Consider claim 1, Zadeh, clearly show (figure 2) and disclose a method (abstract) of locating user equipment 200 (figure 2) in a communication network 10 (figure 1), the method comprising; requesting a location of user equipment which is communicating on a first channel

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with a serving base station (**figure 3A and column 4 lines 44-53**); initiating a determination of the location of the user equipment **200 (figure 2 and 3A and column 4 lines 54-65)**;

However, Zadeh does not specifically disclose handing over the user equipment for communicating on a second channel with a second different serving base station, wherein said determination of the location of the user equipment is suspend until said handling over from the first serving base station to the second different base station has been completed.

In the same field of endeavor, Fischer teaches handing over the user equipment for communicating on a second channel with a second different serving base station (**i.e., BTS 14 a-n of figure 1**)(**see also Fischer col. 10 lines 5-11, col. 14 line 14- col. 15 line 13**), wherein said determination of the location of the user equipment is suspend until said handling over from the first serving base station to the second different base station has been completed (**see Fischer col. 10 lines 5-11, col. 14 line 14- col. 15 line 13, and claims 12 and 13**).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Zadeh to include disclose handing over the user equipment for communicating on a second channel with a second different serving base station, wherein said determination of the location of the user equipment is suspend until said handling over from the first serving base station to the second different base station has been completed as taught by Fischer for the purpose of reducing potential interruptions to the subscriber.

Consider **claim 2, and as applied to claim 1 above**, Zadeh as modified by Fischer also show and disclose a method further comprising receiving a signal indicating that the step of handing over has started (**i.e., the base station acknowledges the channel activation message once it is received**)(**325 figure 3A and column 4 lines 61-67**).

Consider **claim 3**, and as applied to **claim 1** above, Zadeh as modified by Fischer, also show and disclose a method further comprising controlling the first and second channels by a same controller **240** (**figure 2** and **column 4** lines 44-67)

Consider **claim 4**, and as applied to **claim 3** above, Zadeh as modified by Fischer, also show and disclose wherein the step of controlling the first and second channels by a same controller comprises controlling the first and second channels by a base station controller **240** (**column 4** lines 44-67, **column 5** lines 12 –20, **figure 2** and **figure 3b**).

Consider **claim 5**, and as applied to **claim 4** above, Zadeh as modified by Fischer, also show and disclose wherein the base station controller **240** (**figure 2**) controls a plurality of base stations **210, 230** (**figure 2**) (**column 1** lines 45-50) (i.e., the base station controller may be connected to several base transceiver stations).

Consider **claim 6**, and as applied to **claim 1** above, Zadeh as modified by Fischer, also show and disclose wherein the step of requesting a location of comprises requesting a location of a mobile station **200** (**figure 2**, **column 2** lines 20-32, and **column 4** lines 44-53).

Consider **claim 7**, and as applied to **claim 1** above, Zadeh as modified by Fischer, also disclose a method wherein the determination of the user equipment **200** comprises using a time difference of arrival (TDOA) method (i.e., all methods using range difference may be called TDOA. The propagation delay, which depends on distance and further comprises the TA values are expressed in bit periods and can range from 0 to 63) (**column 2** lines 29-44)

Consider **claim 8**, and as applied to **claim 7** above, Zadeh as modified by Fischer, also show and disclose a method wherein the communication network **10** (**figure 1**) comprise a wireless communication system (**figure 1**) having a plurality of base stations **210, 220**, and **230**

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(**figure 2**), each having a location measuring unit (i.e., unit measuring the location or in the Zadeh, case a unit which calculates the TA values)(**column 2 lines 30-66**), the initiating step further comprises using signals received at a plurality of location measuring units of respective base stations from said user equipment **200** (**figure 2 and column 2 lines 30-66**).

Consider **claim 9**, Zadeh, teaches a system (**figure 1**) for locating user equipment **20** (**figure 1**) in a communication network **10** (**figure 1**), the system comprising; a location entity (i.e., PC 270) (**figure 2**); a controller (i.e., application 280)(**figure 2**), configured to send a request to the location entity for locating user equipment which is configured to communicate on a first channel with a first serving base station (**figure 3A and column 4 lines 44-53**), the location entity being configured to initiate a determination of a location of said user equipment (**figure 2 and 3A and column 4 lines 54-65**).

However, Zadeh does not specifically disclose handing over the user equipment for communicating on a second channel with a second different serving base station, wherein said determination of the location of the user equipment is suspend until said handling over from the first serving base station to the second different base station has been completed.

In the same field of endeavor, Fischer teaches handing over the user equipment for communicating on a second channel with a second different serving base station (i.e., **BTS 14 a-n of figure 1**)(see also Fischer col. 10 lines 5-11, col. 14 line 14- col. 15 line 13), wherein said determination of the location of the user equipment is suspend until said handling over from the first serving base station to the second different base station has been completed (see Fischer col. 10 lines 5-11, col. 14 line 14- col. 15 line 13, and claims 12 and 13).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Zadeh et al. to include disclose handing over the user equipment for communicating on a second channel with a second different serving base station, wherein said determination of the location of the user equipment is suspend until said handling over from the first serving base station to the second different base station has been completed as taught by Fischer for the purpose of reducing potential interruptions to the subscriber.

Consider **claim 10**, and **as applied to claim 9 above**, Zadeh as modified by Fischer, further disclose the system (figure 1) wherein the first and second channels are controlled by the same controller **240 (figure 2)**.

Consider **claim 11**, and **as applied to claim 9 above**, , Zadeh as modified by Fischer, further disclose the system (figure 1) wherein the location entity comprises a serving mobile location center (position center **270 figure 2**) (i.e., the position center calculates the location of the mobile station).

Consider **claim 12**, and **as applied to claim 9 above**, Zadeh as modified by Fischer, further disclose the system (figure 1) wherein the location entity is configured to use time difference of arrival method (i.e., all methods using range difference may be called TDOA. The propagation delay, which depends on distance and further comprises the TA values are expressed in bit periods and can range from 0 to 63) (**column 2 lines 29-44**)

Consider **claim 13**, Zadeh, show and disclose a location entity (i.e., the positioning center 270)(figure 2) for use in a system (figure 1) for locating user equipment 200 (figure 2) in a communication network 10 (figure 1), the system comprising a controller (i.e. application 280) (figure 2), and said location entity being configure to:

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Receive a request from a controller for locating user equipment which is configured to communicate on a first channel with a first serving base station (**figure 3A and column 4 lines 44-53**); initiate a determination of a location (**figure 2 and 3A and column 4 lines 54-65**).

However, Zadeh does not specifically disclose wherein said location entity is configured so that when the user equipment is being handing over the user equipment for communicating on a second channel with a second different serving base station, wherein said determination of the location of the user equipment is suspend until said handling over from the first serving base station to the second different base station has been completed.

In the same field of endeavor, Fischer teaches handing over the user equipment for communicating on a second channel with a second different serving base station (**i.e., BTS 14 a-n of figure 1**)(**see also Fischer col. 10 lines 5-11, col. 14 line 14- col. 15 line 13**), wherein said determination of the location of the user equipment is suspend until said handling over from the first serving base station to the second different base station has been completed (**see Fischer col. 10 lines 5-11, col. 14 line 14- col. 15 line 13, and claims 12 and 13**).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Zadeh to include disclose handing over the user equipment for communicating on a second channel with a second different serving base station, wherein said determination of the location of the user equipment is suspend until said handling over from the first serving base station to the second different base station has been completed as taught by Fischer for the purpose of reducing potential interruptions to the subscriber.

Consider **claim 14**, Zadeh, show **(figure 2)** and disclose a system **(figure 1)** of locating user equipment **20,200 (figures 1 and 2)** in a communication network **10 (figure 1)**, the system comprising; requesting means (i.e., an application request)**(280 figure 2)** for location of user equipment which is communicating on a first channel with a first serving base station; initiating means (i.e., an application or PC 270 to initiate request) **(figure 2)** for a determination of the location of the user equipment **200 (figure 2, column 2 lines 20-29, and column 4 lines 44-60)**.

However, Zadeh does not specifically disclose handing over means for handing over the user equipment for communicating on a second channel with a second different serving base station, wherein said determination of the location of the user equipment is suspend until said handling over from the first serving base station to the second different base station has been completed.

In the same field of endeavor, Fischer teaches handing over means handing over the user equipment for communicating on a second channel with a second different serving base station **(i.e., BTS 14 a-n of figure 1)(see also Fischer col. 10 lines 5-11, col. 14 line 14- col. 15 line 13)**, wherein said determination of the location of the user equipment is suspend until said handling over from the first serving base station to the second different base station has been completed **(see Fischer col. 10 lines 5-11, col. 14 line 14- col. 15 line 13, and claims 12 and 13)**.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Zadeh to include disclose handing over the user equipment for communicating on a second channel with a second different serving base station, wherein said determination of the location of the user equipment is suspend until said handling over from the

first serving base station to the second different base station has been completed as taught by Fischer for the purpose of reducing potential interruptions to the subscriber.

Consider **claim 15**, and as applied to **claim 14 above**, Zadeh as modified by Fischer, also show and disclose a system further comprising receiving means for receiving a signal indicating that the step of handing over has started (i.e., the base station acknowledges the channel activation message once it is received)(**325 figure 3A and column 4 lines 61-67**).

Consider **claim 16**, and as applied to **claim 14 above**, Zadeh as modified by Fischer, also show and disclose a system further comprising controlling the first and second channels by the same controller **240 (column 5 lines 12 –20 figure 2, and figure 3b)**.

Consider **claim 17**, and as applied to **claim 16 above**, Zadeh as modified by Fischer, also show and disclose a system wherein the controller is a base station controller **240 (column 5 lines 12 –20 figure 2 and figure 3b)**.

Consider **claim 18**, and as applied to **claim 17 above**, Zadeh as modified by Fischer, also show and disclose a system wherein the base station controller **240 (figure 2)** controls a plurality of base stations **210,230 (figure 2)** (also see column 1 lines 45-50 (i.e., the base station controller may be connected to several base transceiver stations).

Consider **claim 19**, and as applied to **claim 14 above**, Zadeh as modified by Fischer, also show and disclose wherein the user equipment comprises requesting a location of a mobile station **200 (figure 2 and column 2 lines 20-32)**.

Consider **claim 20**, and as applied to **claim 14 above**, Zadeh as modified by Fischer, also disclose a system wherein the determination of the location of the user equipment **200** comprises using a time difference of arrival (TDOA) method (i.e., all methods using range difference may

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be called TDOA. The propagation delay, which depends on distance and further comprises the TA values are expressed in bit periods and can range from 0 to 63) (**column 2 lines 29-44**)

Consider **claim 21**, and **as applied to claim 20 above**, Zadeh as modified by Fischer, also show and disclose a system wherein the communication network **10 (figure 1)** comprise a wireless communication system (**figure 1**) having a plurality of base stations **210, 220, and 230 (figure 2)**, each having a location measuring unit (i.e., unit measuring the location or in the Zadeh et al., case a unit which calculates the TA values)(**column 2 lines 30-66**), the initiating means (i.e., positioning center, **270**) using signals received at a plurality of location measuring units of respective base stations from said user equipment **200 (figure 2, and column 2, lines 30 - 59)**.

Consider **claim 22**, Zadeh teach the claimed invention except a method of claim 1, wherein if the handing over from the first serving base station to the second different serving base station is successfully completed, initiating the location procedures with regard to the second channel.

However, in the same field of endeavor, Fischer teaches wherein if the handing over from the first serving base station to the second different serving base station is successfully completed, initiating the location procedures with regard to the second channel (see **Fischer col. 10 lines 5-11, col. 14 line 14- col. 15 line 13, and claims 12 and 13**).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Zadeh to include wherein if the handing over from the first serving base station to the second different serving base station is successfully completed,

initiating the location procedures with regard to the second channel as taught by Fischer for the purpose alleviating potential service interruptions.

Consider **claim 23**, Zadeh teach the claimed invention except wherein if the handing over from the first serving base station to the second different serving base station is successful, continuing the location services with determining the location of the mobile station on the first channel.

However, in the same field of endeavor, Fischer teaches wherein if the handing over from the first serving base station to the second different serving base station is successful, continuing the location services with determining the location of the mobile station on the first channel (see **Fischer col. 10 lines 5-11, col. 14 line 14- col. 15 line 13, and claims 12 and 13**).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Zadeh to include wherein if the handing over from the first serving base station to the second different serving base station is successful, continuing the location services with determining the location of the mobile station on the first channel as taught by Fischer for the purpose alleviating potential service interruptions.

Conclusion

3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles Shedrick whose telephone number is (571)-272-8621. The examiner can normally be reached on Monday thru Friday 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kincaid Lester can be reached on (571)-272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Charles Shedrick
AU 2687
January 23, 2006



NICK CORSARO
PRIMARY EXAMINER